

tinually importuned by politicians to make room in the organization for their friends, and pressure was brought to bear upon me to take back employees discharged for rank inefficiency. At one time an attempt was made to divert the moneys of the fund to highway finance. If I had not stood stoutly against this, the action would have reduced the surplus of the fund approximately half a million dollars. Should the need for insurance brains and competitive instincts be removed by the legislative creation of a bureaucratic monopoly, the greater opportunity for sinecures and the paying of political debts is very apparent indeed.

Governor C. C. Young commented on this question in a letter dated August 16, 1926, in the following language:

"In my own business, for a number of years, my firm wrote all our compensation insurance with private companies, and with satisfactory results. From my present knowledge of the situation, I do not see any necessity for a change in the existing law as regards this matter."

It is one thing to make accident and health insurance compulsory for a third of the population of a great state and in effect require the beneficiaries to accept the doctors and hospitals designated by a score or more competing insurance companies and many self-insurers; but it is something else to reduce this enormous medical problem to a government monopoly, with the right to fix premiums and force a million assured to accept this service of an amazingly small group of doctors, selected for them by nonmedical appointees of a government bureau and paid the inadequate fees that have characterized this medical price-fixing bureau since its inception.

ORGANOTROPIC VERSUS ETIOTROPIC ACTION IN THERAPEUTICS

The first cardinal requirement of rational treatment is removal of the cause, and sometimes this is simple enough, but more commonly it is the most difficult, if not impossible, task. The latter is true even of conditions whose etiology is understood. The situation would appear more chaotic with those whose etiology is unknown, yet it is in many diseases of unknown etiology that certain measures demonstrate most satisfactory therapeutic results. This appears to be true of the general group of allergic conditions. While the mechanism of the therapeutic responses in these conditions is not yet understood, the results already obtained point the way to future studies. These, it is hoped, will be useful not only for an understanding of the so-called etiotropic and specific, but also of the organotropic, humoral and nonspecific agents. It is the latter group that merits extended consideration, for their usage in therapeutics has not always appeared rational, possibly because we have been too greatly impressed with "specific" agents. The older alterative and general tonic drugs fall into the category of the nonspecific and organotropic agents.

A few examples of demonstrated indirect and organotropic actions will make it clear that specificity is no longer the *sine qua non* of therapy, nor that direct action is the only worthy one. Dale showed long ago that the pressor action of nicotine, a specific ganglionic poison, was only partly due to ganglionic stimulation. The chief part was due to an increased output of epinephrine from the adrenals caused by the nicotine, for the typical rise of blood

pressure was prevented in adrenalectomized animals. Tainter has shown that gross edema of the head can be prevented by nontoxic doses of strychnine, nicotine and some other drugs, providing the adrenals are intact, the preventive effects being due to increased epinephrine output from an action of these drugs on the adrenal glands. As the result of such indirect actions of strychnine, really actions of epinephrine, several investigators have demonstrated a general stimulation of the sympathetic nervous system. It is interesting to note that such stimulations are better sustained than from the injections of epinephrine itself. Proceeding upon the basis of such results, the tonifying action long attributed to strychnine may not be so irrational as it once appeared on classical pharmacological grounds. A tonifying action may be easily visualized from the increased epinephrine on the circulation, the maintenance of vascular tonus, the increased basal metabolism, the diminished muscular fatigue—phenomena that have all been demonstrated with, and are well-known actions of, epinephrine itself. The contributory benefit from an improved circulation must in itself be an improvement of considerable moment for functions in general. All these rather than the bitter stomachic effects, which are perhaps largely psychic, may be the basis of strychnine therapy, an altogether indirect and organotropic action, and not at all connected with the conventional increased reflex excitability or convulsant action of the drug. While the indirect actions of strychnine have been demonstrated with rather large therapeutic doses, it is reasonable to suppose that some part of the action is occurring with ordinary therapeutic doses. The physiological methods of measuring the epinephrine output, though delicate enough when compared with other methods, are nevertheless gross and crude when compared with the scarcely measurable outputs in virtue of scarcely measurable natural stimuli going on unconsciously in all of us. The time may come when such minute and apparently insignificant quantities of epinephrine and other constituents will be measured. Then perhaps they will no longer be regarded as insignificant.

Moreover, it need not be an increased output of epinephrine that is the basis of the alterative and stimulant actions of therapeutic agents. Outputs of other secretions, to mention only the thyroid and pituitary, have not yet been extensively tested in this connection, although in the case of pituitary it seems well established in lower species that pituitary can yield constituents whose presence in the circulation increase capillary tonus. The recent work of Geiling and Campbell shows that the circulatory actions of pituitary extract are mediated through altered states of the tissues. The excited state of bronchial muscle determines the usefulness of epinephrine and ephedrine as correctives of asthma. Marine has shown that the basal metabolism is changed by administering adrenal cortex which acts through the thyroid gland. Insulin, no doubt, too, exerts its action through the tissues, perhaps through the skeletal muscles and not directly through the blood sugar changes, though the latter are the main index of its effects. The recent results of Collip with para-

thyroid extract indicate that this therapeutic agent mediates its benefit through calcium mobilization. The list of agents of this type is increasing and the whole field of therapeutics offers new and alluring prospects. Adequate exploration of this field may ultimately reveal that other drugs exert their benefits through the medium of tissues, glands, organs, etc. This attractive viewpoint has been suggested by Dale as the probable mechanism of the beneficial action of most chemotherapeutic agents, including quinine in malaria, arsphenamine in syphilis, etc., for these drugs are notoriously inefficient on the parasites of these diseases *in vitro*; that is, they are probably not specific, for they do not act directly on the infecting organisms.

In seeking to explain more fully and to determine the basis of therapeutic actions, and thus to fill many gaps in our knowledge, it will require methods as yet imperfectly developed, and at present difficult of application in biology. The ordinary methods of pharmacology probably will not suffice. Various physical and chemical changes in the tissues, not easily recognizable or demonstrable, nevertheless must be given attention, for in these indirect effects on the organism with its multiple factors may reside the hitherto unrecognized explanations of drug actions. It is possible that therapeutic improvements may be elaborated as the result of such fundamental studies. In this category may indeed belong the recognized merits of malarial infection and of proteins in the therapy of neurosyphilis, and of other older practices and measures. From this it follows that therapeutic agents need not be etiotropic, nor even specific, but, on the contrary, much good, or even more, may be expected from the organotropic and humoral varieties. The possibilities of the latter appear wider and greater; and they are all the more alluring in view of the conspicuous failures of the alleged "specific" dyes, and of the continued effort to improve on and seek substitutes for yet more "specific" antisyphilitic remedies.

Twenty-two thousand syphilitics were reported (by number, as required by law) to the California Board of Health during the last two years. A comparison of these figures with Ophüls' report (Stanford University Press) of the findings in 3000 necropsies gives food for serious reflection on the effectiveness of another of our many laws. No one can make even an intelligent guess as to the number of syphilitics nor of the ravages of this "king of diseases." Certainly not more than 5 per cent of them are being reported as required by law in this or any other state. This, after many years of intensive, expensive effort seems to signify that these laws and procedures need further study. We know that thousands of infants are destroyed by syphilis before they are born, other thousands are sacrificed shortly after birth, or live unhappy, unhealthy lives and often become public charges. We know that syphilis is a powerful factor in producing the rapidly increasing population of our state institutions, and that all of these tangible evidences of its frightful havoc are but an obscure index to its far greater damages, of which we have no collective information, and which we are not getting and will not be able to secure.

Isn't it likely that our compulsory notification law or, more correctly speaking, its implication as fixed in the minds of most people, violates something that is inherently resented by the average citizen, and by the majority of physicians who serve them in confidence, as unwarranted interference?

Physicians report smallpox, diphtheria and many other communicable diseases with at least a semblance of accuracy, but that they do not so report syphilis is obvious.

The law has done some good in encouraging a certain number of syphilitics, chiefly those already semidependent, to apply for treatment at public expense. Such treatment probably keeps many from drifting into complete dependency and no doubt leads to the cure of some. But the great harm of this most prevalent disease in the destruction of infants and the frightful crippling of young men and women goes on apparently but slightly affected under present methods.

Whether existing laws are proving an asset or a liability in attempts to combat syphilis is not under review; but whatever the answer, the weight of medical opinion is, that some method or methods not yet in evidence must be instituted before we move forward as we should toward the control of the most far-reaching, destructive and crippling enemy of mankind.

For some time *The Forum* magazine has been running a department of definitions of words and phrases. They got along pretty well until their readers started to define "the normal child" and "the perfect child"—then what a stew. It is interesting and amusing and promising of long delay in establishing a standard of normality which, of course, does not exist among children or other growing things.

A significant development of public health work in New York is the recent establishment of children's health consultations on a county-wide basis, *under the management of local county medical societies*; this assuring real decentralization in the work of preventing the diseases and defects of childhood.

The county medical societies are assuming the responsibility of holding these consultations in the rural districts where they are most needed, appointing the medical examiners from their own members. Some of the societies have held symposiums on the findings of the consultations, discussing ways and means of increasing their effectiveness, and laying careful plans for the follow-up. When the latter work is done an endeavor is made to get those who have been examined to go to their own physicians for treatment and corrective work. "An allotment of \$15 from federal funds for a four-hour clinic day provides the fee of the physician who makes the examinations," says *Health News*, the official publication of New York State Department of Health. Some county societies, we learn use the funds secured from this work for the promotion of other society purposes.

This is a most gratifying and encouraging movement. Its extension to the some 3000 counties would prove the first chapter in a new epoch in medical progress. What an opportunity!

We are informed that William Randolph Hearst's policies include an editorial commendatory of physicians, twice yearly in each of his papers. One such recent editorial from the Los Angeles *Examiner* says in part:

"The service that they (physicians) give is truly remarkable. They have made for themselves a human code as fine and helpful as mankind has ever known and they obey it with the devotion and self-forgetfulness of soldiers enlisted in a crusade.

"But there is something more than that even. They are engaged in a continual fight not only against the illness suffered by the individual, but against disease itself. The advance in medical science has been one of the great historic contributions of this age. In trying to find ways to banish the ills that flesh has been heir to—and succeeding in many notable instances—the medical profession is doing that which tends to its own extinction. For if the program of the doctors finally prevails, there will not be any major diseases. And that would mean fewer doctors.

"One of the noblest records of the race is the story of the medicos. It has its great dramatic chapters, as during plagues and war, and in cleaning up the fever-infested places of the earth. But the main part of the narrative is provided by the daily acts of service of these

men who have taken upon themselves an obligation that is perhaps greater in its exactions than any other known to humanity."

The statement broadcast by the Federal Children's Bureau that they "REACHED" nearly a million babies and 180,000 expectant mothers during 1926, caused editors of all classes to "reach" for their books on synonyms and it brought a grim smile to 150,000 bedside doctors who are doing their best to do a great deal more than "reach" their patients.

Some editors who understand "reach" only in the political sense are confused as to just how it applies in rendering medical care.

Glenn Frank, college president, writer of syndicated feature stories, former magazine editor, has caused quite a lot of talk by reviving again the perennial argument that doctors should serve their patients on an annual retainer basis.

One might gather from Mr. Frank's philosophy that this would constitute an innovation, when in fact it is the current method of health service among a large percentage of the world's population, and is by no means rare in our country.

It is precisely the method of all health associations, many lodges, fraternal societies, etc., and is rapidly becoming a reliance of insurance companies, industrial plants and what-not. It is the chief objective toward which government and corporation medicine is moving as fast as possible.

"What secret is the physician harboring? What is medical science planning for the race? Where are we going with the human body? Back to the models of ancient Greece, or to a new superman by eliminating disease, by exercise, by sanitation, by banishment of worry? Is disease about to be outlawed as a crime as it was in the ideal commonwealth of Erewhon? The Greeks took these questions to their God of Medicine, Aesculapius. Today, unless we refer them to God, like the Christian Scientists, we consult our family physician."

Thus the editor of *The Forum* (July, 1927), introduces an article by George E. Vincent, president of the Rockefeller Foundation, on the future of medicine. President Vincent continues: "Health is a boresome theme. The idea of normality is unexciting; it is the exceptional, the pathological, that arrests attention. Keeping fit for sport, for example," he emphasizes, "is quite another thing from the full business of merely keeping well."

"If the idea of individual normality lacks fascination what shall be said of the cause of public health? How ready the average citizen is to admit its importance, to take it for granted; how reluctant to hear about it or to try to understand it! Only when the system breaks down or interferes with the individual is he for the moment panic-stricken, indignant, or rebellious. *For all the fine phrases about the triumphs of modern sanitation and hygiene, the subject of public health leaves most people cold.*"

Vincent believes this to be the logical outcome of imposing public health "upon communities and nations by experts who have had the backing of governments." "Further progress through official authority," believes the author, "is becoming increasingly difficult, and for a quite obvious reason. Later gains must come from the more or less voluntary behavior of the individual with respect to food, posture, exercise, sleep, fresh air, clothing, mental and emotional life. Thus it comes about that in the leading countries emphasis is shifting from sanitation and epidemiology to personal hygiene, from an external and compulsory protection of population groups to the education and stimulation of the individual."

"This change of emphasis," continues President Vincent, "is the characteristic feature of contemporary public health. It reveals itself in the increasing complexity of official machinery, in the multiplication of specialized voluntary societies, in health education in schools and colleges, in a growing volume of health publications, in popular articles, in health posters and films. The average individual is being exposed to warning, suggestion, ap-

peal, and exhortation. And he for the most part is protecting himself, so long as he feels fairly well, against the discomfort of reflection and the inconvenience of changing his mode of life."

"The change of emphasis in public health work from cure to preventions has caught the doctors napping. The average physician is ill prepared to make the periodic health examination and to give the advice about personal hygiene which the new régime demands; he has been trained to look for disease rather than for health."

This entry of public health officers into competition with personal health doctors need not cause these "napping" servants of health concern, particularly in view of the fact that the best of the statistics made by the self-appointed super-doctors show that they can find few, if any, healthy subjects on whom to practice their prevention. Someone must repair the defects and broken parts in the overworked automobile, used as an analogy by the author, before the preventors find material suitable for their advice. There is more for the human repair men to do than ever before in the history of the world, and we suspect that most people will continue for a long time to listen to the doctor who has repaired defects about how to avoid future accidents, rather than the government inspector who is ever present with his "super-knowledge."

President Vincent concludes his discussion with the sound statement that, "in spite of confusing doubts and queries, generally indifferent to them, the protagonists of public health and hygiene go their way, sanitating the environment, trying with increasing success to control communicable diseases, and urging groups and individuals to live wiser, more wholesome lives, not simply for the sake of escaping disease, but to know the positive joy of vigorous physical and mental activity in work and play and community life."

If they only would!

Deputy (New York) Commissioner of Health, Paul B. Brooks (New York State Jour. Med., December 15, 1926), tells doctors there is a future in the private practice of disease prevention. He believes that the alleged decrease in private practice caused by the invasion of their field by government and other organizations may be overcome by the private doctor branching out into new lines.

It is suggested that the private physician could "develop a paying practice made up largely of preventive work." Protective inoculations are mentioned as some of the "many things that a physician" (presumably meaning the garden variety) "can do in this line." Such logic (?) overlooks the fact that it was precisely from these preventive and other personal health services that the private physician earned a fair share of his livelihood until government largely drove him from the field with its organized propaganda and offered—to rich and poor alike—these services, and even the materials used, "free."

It is hard for the personal health physician to meet government competition and government propaganda in offering everything "free," but in spite of the handicaps and ballyhoo about free service, isn't it a fact that personal health physicians continue as formerly to do much of the protective inoculation and other preventive work for most of their clients? The sales tags of drug stores reveal the answer.

Administration of Cod Liver Oil—Henry J. Gerstenberger, Cleveland (*Journal A. M. A.*), advises that cod liver oil should be given once daily on an empty stomach and when most of the family members are likely to be at home. In other words, the cod liver oil should be given in whatever dose thought necessary before breakfast. If under these circumstances the child vomits its first dose, a second should be immediately administered. As it also is a good policy to see that an antiscorbutic substance is administered daily, a small amount of orange juice, if desirable, may be taken immediately after the cod liver oil has been swallowed. The parent, however, is advised not to offer the orange juice as a reward or as a "chaser," but to get the child to understand in the first place that cod liver oil is essential to his welfare, and in the second place that he will get accustomed to its taste within a week or ten days.